



***“By 2025, the first geological disposal facilities for spent fuel, high-level waste and other long-lived radioactive waste will be operating safely in Europe.”***

## Editorial

Dear Reader,

In 2015, four projects prepared by IGD-TP working groups have been successful in obtaining the support of the European Commission (EC). Combined, these represent a global budget of 21,3 M€ with an EC contribution of 15,1 M€. This excellent result confirms the key role of IGD-TP as the lead “Think Tank” in the research activities linked with the IGD-TP vision and also with the implementation of the Waste Directive. Furthermore, it demonstrates the involvement of IGD-TP participants in preparing proposals with the highest quality standards.

Three of these projects deal with the IGD-TP’s scientific and technical priorities. These are: Modern2020 (a follow-up of the MoDeRn project on monitoring strategies and techniques), MIND (Microbiology In Nuclear waste Disposal), and Cebama (CEment BAsed MAterials: properties, evolution and barrier functions). The fourth project, JOPRAD (Towards a Joint Programming on Geological Disposal), aims at exploring the possibility of setting up joint programming on waste management and geological disposal research activities.

In 2015, the IGD-TP revised its Strategic Research Agenda. This analysis and subsequent discussions led to some modifications of priorities taking into account the outcomes of the nine projects initiated and followed up by the IGD-TP since its inception. This activity led also to the identification of five new potential proposals to be submitted as a contribution to the EURATOM work programme 2016-2017 published in October.

As part of what is usually termed “horizontal activities”, the IGD-TP published in 2015, a guide on “RD&D Planning for geological disposal of radioactive waste.” Specifically focused on providing technical guidance towards the less advanced programmes, this document was extensively discussed at the PLANDIS Workshop in Romania and is already being used by some of the countries who attended.

IGD-TP is now in a state of maturity, with the development of two to three major technical projects per year, and, in our recent Exchange Forum, the engagement of 170 participants. Our organisation, voluntarily kept as simple as possible, has proved to be efficient due to strong membership involvement and a shared mindset of high work quality and personal commitment.



Thanks to the EC who supported the establishment of the IGD-TP and its vision oriented towards the design, construction and operation of geological repositories, we are in position, with all the research community including the technical support organisations, to build a common area of research to benefit all European countries. This initiative is also attracting interest from American and Asian countries.

Monica Hammarström, Chair

## Content

<b>Editorial .....</b>	<b>1</b>
<b>IGD-TP News &amp; Activities .....</b>	<b>2</b>
Past Events	
JA news	
<b>JOPRAD project .....</b>	<b>5</b>
<b>New H2020 technical projects .....</b>	<b>6</b>
Cebama	
MIND	
Modern2020	
<b>News from Technical Projects.....</b>	<b>9</b>
CAST	
DOPAS	
<b>Focus on H2020 .....</b>	<b>11</b>
<b>Save the date .....</b>	<b>12</b>

Director of publication: M. Hammarström, Chair IGD-TP

Editorial team of the Secretariat of IGD-TP:  
M. Garcia, J. Delay, M. Palmu, R. Kowe

Contact: [secretariat@igdtp.eu](mailto:secretariat@igdtp.eu)  
Website: [www.igdtp.eu](http://www.igdtp.eu)

## PAST EVENTS

### 6<sup>th</sup> IGD-TP Exchange Forum (EF6)

The IGD-TP Exchange Forum brings together the geological disposal of radioactive waste community in order to:

- informally discuss common interests in RD&D,
- highlight IGD-TP ongoing activities and EC projects,
- initiate or enhance collaboration with other organisations,
- explore new ideas that could complement the IGD-TP Strategic Research Agenda, and
- prepare future activities and projects that may be submitted under the EC Euratom work programme.

EF6 was held on 3-4<sup>th</sup> November 2015 in London, UK and attracted about 170 participants. Specific Key-notes talks were given in plenary sessions on:

- Siting Process in UK
- H2020 WP 2016-2017 and future Euratom programmes
- Radiation Protection Research in Europe: Reaching out to IGD-TP
- NEA IGSC Interaction with the IGD-TP
- State of high-level waste disposal in the U.S.
- Dissemination of RD&D to less advanced programmes

In addition to the plenary sessions, four parallel technical sessions were organised around four topics:



EF6 was also the occasion to review the EC projects that were completed in 2014: PEBS, MoDeRn and REDUPP projects. The aim was to present the outcomes and assess the achievements of these projects. A review was carried out by an expert in the area including an assessment of how the projects have helped to achieve the IGD-TP's vision. Furthermore, the three technical projects accepted by EC in the framework of the Horizon 2020 EURATOM 2014-2015 work programme: Modern2020, CEBAMA and MIND were presented. All presentations are available on [www.igdtp.eu](http://www.igdtp.eu).

*JA14, Competence Maintenance, Education and Training, SeclGD2 Project, WP3*

### CMET meeting n°5

The IGD-TP Working Group on Competence Maintenance, Education and Training met for the 5<sup>th</sup> time in April 2015, at the IST Alameda Campus in Lisbon, Portugal. The working group meeting was organised back to back with the Petrus III project meeting to enable as wide a participation in both events. 15 CMET members participated in a dedicated training workshop tutored by Ms. Cheryl Contee from Fission Strategies. Ms. Contee engaged the participants into the range and use of current social media tools to get across the message. The participants were able to carry out quick selection of suitable tools for their messages and other uses. Future uses were drafted in the form of illustrative cartoons. The increased importance of mobile e-learning solutions for the future of education and training was highlighted. The training materials will be available later this year on the JA 14 CMET page on [www.igdtp.eu](http://www.igdtp.eu) site.



*Identifying the right social media tools, April 15*

© Marjatta Palmu

## PAST EVENT

CC4 - COMMUNICATION & DISSEMINATION , SecIGD2 Project, WP2

### PLANDIS meeting

In the framework of the IGD-TP activity to network, structure and develop Research, Development and Demonstration (RD&D) programmes and competences in countries with less advanced geological disposal programmes, IGD-TP experts has published a guide to help those countries to address the 2011 EC Waste Directive requirements. In particular: 'to set-out RD&D activities that are needed in order to implement national policies for the responsible and safe management of spent fuel and radioactive waste.'

In association with the guide, the IGD-TP organised a workshop ([PLANning geological DISposal of radioactive waste in Europe - PLANDIS](#)). The workshop was aimed at communicating, reviewing and assessing the guidance document. In particular, it allowed participants to:

- Gain experience of ranking a list of potential RD&D tasks.
- Meet other professionals working on RD&D in a disposal programme.
- Gain experience of completing the Guide template on RD&D prioritization to take away as useful input to own programme.
- Interact with experienced RD&D planners in a more 'informal' setting to ask questions and provide feedback on Guide.



PLANDIS participants

PLANDIS was held on 26 May 2015 and was hosted by the Institute for Nuclear Research, Pitești in Romania. It was attended by 36 delegates from 12 countries with a strong representation from less advanced programmes.

Ray Kowe who helped organise and facilitate the workshop said:

*"The workshop was an opportunity for new member states to gain experience of prioritising their potential research, development and demonstration work to meet their needs. They also had the opportunity to meet the more experienced RD&D planners from other countries.*

*I was pleased with the feedback received by participants which has now been fed into the latest draft of the guide, I believe this has made it more relevant and useful to RD&D planners and researchers".*

Several presenters at the workshop also attended and spoke at the Nuclear 2015 conference which followed the PLANDIS workshop at the Institute for Nuclear Research.

The intention is now to further disseminate the guide to potential users and to present and publish another version of the guide at the IGD-TP 6th Exchange Forum meeting in London in November 2015.

## IGD-TP NEWS & ACTIVITIES

### *JA8: Handling of Uncertainties in the Safety Case for Geological Disposal of Radioactive Waste*

Geological disposal systems are subject to various uncertainties, especially in view of the very long timescales for which their safety needs to be assured. **Proper handling of uncertainties in numerical calculations to support the safety case** is an important topic that has been identified by a number of waste management organisations (WMOs) and stakeholders. Recent work carried out and published by the OECD-NEA and the IAEA in the context of previous EC R&D projects (e.g. PAMINA) revealed areas for further research, specifically in view of new theoretical developments. To build confidence in a specific disposal concept and site under consideration, it is necessary **to identify all relevant uncertainties and to correctly assess their influences on the safety functions**. Not all uncertainties, however, are significant or detrimental to safety.

A **Technical/Scientific Working Group (TSWG)** was set up two years ago under **IGD-TP Joint Activity 8** (referring to the SRA's key topic 1: Safety Case). This TSWG, composed of European WMOs and a number of research institutions from European countries and the USA, is exploring and further developing strategies for dealing with uncertainties in the safety case.

In this context and working with members of the OECD-NEA Integration Group for the Safety Case (IGSC), 16 scientists from 8 European countries and the USA convened for a **workshop on the handling of uncertainty in safety cases, hosted by RWM on 23 / 24 September 2015**. The workshop addressed three main themes:

- The **quantification of uncertainty in uncertain parameters for modelling**. The goal was to review existing approaches, demonstrate how bias may affect uncertainty quantification and consider practical tools to aid uncertainty quantification.
- **Modelling aspects in the context of handling uncertainties including** a review of the use of the outcomes of the EC PAMINA project and what has been developed since.
- **Sensitivity analysis** – recent developments and applications of sensitivity analysis methods to repository performance assessment models.

Several organisations have worked with different intensity on one or more of these topics over recent years. The workshop provided a platform for an exchange of experiences, which was very fruitful. The participants gave presentations on expert elicitation techniques, recent developments in modelling uncertain influences as well as experiences with classical and new methods of sensitivity analysis. Regarding all of these topics, specific areas for future information exchange and collaboration were identified. It was agreed that **increased international co-operation to develop an effective, proportionate methodology for uncertainty quantification and management, that recognises that programmes are at different stages of development and have different regulatory expectations, would be of practical benefit to safety assessments**.



*Participants of the Workshop on Handling of Uncertainty, 23-24 September 2015, Harwell, UK*

## Towards a Joint Programming on Radioactive Waste Disposal - JOPRAD -

### JOPRAD

The JOPRAD project is a Coordination and Support Action funded by the EC through the H2020 Euratom programme. The goal of JOPRAD is to prepare the conditions for the setting up of a **Joint Programming on Radioactive Waste Disposal**.

Such Joint Programming would bring together at the European level, those aspects of Research and Development (R&D) activities implemented within national research programmes where synergy is identified. The joint R&D activities concern geological disposal of spent fuel and other high activity long lived radioactive waste, including waste management aspects linked with their disposal and other key activities (Education and Training, as well as Knowledge Management). Further information on [www.joprad.eu](http://www.joprad.eu).



*The JOPRAD consortium, September 2015, Ecuery, France.*

### ANNOUNCEMENT

JOPRAD is organising a **Regional Meeting** on 3-4<sup>th</sup> February 2016 in Bucharest, Romania, in order to **inform on, engage and involve countries with less advanced geological disposal programmes (LAP) in the process of Joint Programming (JP) and its preparation within the JOPRAD project.**

In order for the LAP to get involve in the future Joint programming, the JOPRAD Regional Meeting will increase the awareness of decision makers concerning:

- General meaning of any future Joint Programming
- Possible means and methods for getting involved in JOPRAD, i.e. in the preparation phase for any future Joint Programming
- Means and methods for implementing Joint Programming as the outcome of JOPRAD
- Benefits of Joint Programming for meeting the Waste Directive requirements
- Eventually the meeting will help to stimulate national discussions in order to define Mandated Actors and the tasks assigned to them.

Target audience: New Members States governmental institutions; New Members States representatives from Waste Management Organisations, Technical Support Organisations and Research entities; Civil Society representatives; nuclear fission community; platforms dealing with education and training

Practical information:

**Registration deadline :** January 15, 2016

**Meeting venue:** Marshal Garden Hotel, Bucharest, Romania, 50 B, Dorobantilor Boulevard, District 1, 10574

**Registration:** Via e-mail to: [JOPRAD\\_Regional\\_meeting@joprad.eu](mailto:JOPRAD_Regional_meeting@joprad.eu)

**Contact person:**

Jitka Miksova (CVREZ) [jitka.miksova@cvrez.cz](mailto:jitka.miksova@cvrez.cz) and Daniela Diaconu (ICN) [daniela.diaconu@nuclear.ro](mailto:daniela.diaconu@nuclear.ro)

Further information on [www.joprad.eu](http://www.joprad.eu)

## New H2020 TECHNICAL PROJECTS

### JA6 - Confidence increase in the safety assessment codes - Materials interactions

#### Cebama



Cebama is a research and innovation action granted by the European Atomic Energy Community in support of the implementation of the first-of-the-kind geological repositories. **The 4-year project Cebama started 1<sup>st</sup> of June 2015 and is carried out by a consortium of 27 partners consisting of large Research Institutions, Universities, one TSO (Technical and Scientific Support Organizations), and one SME (small medium enterprise) from 9 EURATOM Signatory States, Switzerland and Japan.** National Waste Management Organizations support Cebama by co-developing the work plan, participating in the End-User Group, granting co-funding to some beneficiaries, and providing for knowledge and information transfer. The kick-off meeting of Cebama was held on Thursday, 2nd of July, 2015 in Brussels with selected representatives from all project beneficiaries joining.



*The Cebama Kick-off meeting was held on July 2<sup>nd</sup>, 2015, in Brussels, hosted by EC.*

**Cebama addresses key issues of relevance for long-term safety and key scientific questions related to the use of cement-based materials in nuclear waste disposal applications.** The overall strategic objective of Cebama is to support the implementation of geological disposal by significantly improving the knowledge base for the Safety Case for European repository concepts. The scientific/technical research of Cebama is largely independent of specific disposal concepts and addresses different types of host rocks, as well as bentonite. Cebama is not focusing on one specific cementitious material, but aims at studying a variety of important cement-based materials in order to provide insight on general processes and phenomena which can then be easily transferred to different applications and projects. Specific objectives of Cebama are summarized as:

- *Perform experimental studies to understand the interface processes between cement-based materials and the host rocks (crystalline rock, Boom Clay, Opalinus Clay (OPA), Callovo-Oxfordian (COX)) or bentonite backfill and assess the impact on physical (transport) properties. (WP1).*
- *Study radionuclide retention processes in high pH concrete environments. Radionuclides which have high priority from the scientific and applied perspective are selected. (WP2).*
- *Improve validity of numerical models to predict changes in transport processes as a result of chemical degradation. Support advanced data interpretation and process modelling, covering mainly issues responsible for the changes in transport properties. (WP3).*

A key activity of Cebama, open to all interested to participate, are the **Annual Project Workshops** which serve as an important forum for **dissemination of the research performed within the project**. The First Annual Project Workshop will be organized by Amphos21, over at least 2 days in the week from May 8th 2016, in Barcelona, Spain. Exact dates and registration will be available in 2016 at Cebama website.

Cebama is offering the opportunity of external groups to join the project within the status of Associated Groups (AG). AGs can participate in Cebama at their own costs with specific scientific/technical contributions or particular information exchange functions. The AGs will be invited to the Annual Project Workshops and receive access to the public deliverables and scientific technical information obtained in the project (contact: [marcus.altmaier@kit.edu](mailto:marcus.altmaier@kit.edu)).

Information about Cebama, such as key project events, main scientific results, open PhD positions and research highlights are available on the project website ([www.cebama.eu](http://www.cebama.eu)).

## New H2020 TECHNICAL PROJECTS

### JA6b - Microbiological issues

## MIND



The idea to start the MIND-project was born at the Exchange Forum 4, in Prague in 2013. Microbiologists and geochemists met at first in a working group within the IGD-TP. During the discussions it was found that there were many questions and unresolved issues in common for the different organisations.

The project brings together 15 European groups focusing on key questions posed by waste management organisations. The emphasis will be **on quantifying specific measurable impacts of microbial activity on safety cases under repository-relevant conditions, thus altering the current view of microbes in repositories and leading to significant refinements of safety case models currently being implemented to evaluate the long-term evolution of radioactive waste repositories.**

The MIND project officially started June 1, 2015 and the kick-off was held in Brussels September 2, 2015. Representatives from all 15 organisations participated. MIND is a multidisciplinary project addressing key technical issues that must be tackled to support the implementation of planned geological disposal projects for both higher-level (HLW) and intermediate level (ILW) radioactive wastes across the EU.

The Scientific Technical Work Programme is divided into two operative Work Packages (WPs) focussing on ILW and HLW respectively. The third Work Package concerns data implementation and communication intended to share the outcome of the experimental work packages to a broad audience, including students, professionals, the scientific community, stakeholders and the lay community. Work package 4 concerns Project management.

For further information, please visit: [www.mind15.eu](http://www.mind15.eu).



*Representatives from the 15 organisations in the MIND project at the kick-off in Brussels September 2, 2015. The work-package leader for WP3, Katinka Wouters SCK-CEN, is missing in the picture.*

Schedule of deliverables in year 1:

Deliverable	WP and date of delivery
Deliverable 1 Website	WP4 August 31, 2015
Deliverable 2 Project presentation	WP4 August 31, 2015
Deliverable 3 Review of organic wastes (ILW)	WP1 November 30, 2015
Deliverable 4 Dissemination and Exploitation Plan	WP4 November 30, 2015
Deliverable 5 Data management plan	WP4 November 30, 2015
Deliverable 6 Evaluation report	WP3 May 31, 2016
Deliverable 7 Risk Communication	WP3 May 31, 2016

## New H2020 TECHNICAL PROJECTS

### JA7 - Monitoring programme

# Modern2020

Modern2020 is a four-year project funded by the EU's Horizon 2020 research and innovation programme (2014–2020) under grant agreement number 662177. Modern2020 started operating 1<sup>st</sup> June 2015 and is coordinated by Andra (France).

Based on the recommendations from recent international collaborative efforts, including the outcomes of the MoDeRn Project and IGD-TP Exchange Forum n°4, the overall objective of the **Modern2020 project** is to provide the means **for developing and implementing an effective and efficient repository operational monitoring programme, that will be driven by safety case needs, and that will take into account the requirements of specific national contexts** (including inventory, host rocks, repository concepts and regulations, all of which differ between Member States) **and public stakeholder expectations** (particularly those of local public stakeholders at (potential) disposal sites).

The work in Modern2020 will address the following issues: i) Strategy: development of detailed methodologies for screening safety cases to identify needs-driven repository monitoring strategies and to develop operational approaches for responding to monitoring information; ii) Technology: carry out research and development (R&D) to solve outstanding technical issues in repository monitoring, which are related with wireless data transmission technologies, alternative long term power supplies, new sensors, geophysics, reliability and qualification of components.; iii) Demonstration and Practical Implementation: enhance the knowledge on the operational implementation and demonstrate the performance of state-of-the-art and innovative techniques by running full-scale and in-situ experiments; iv) Societal concerns and Stakeholder Involvement: Develop and evaluate ways for integrating public stakeholders concerns and societal expectations into repository monitoring programmes.

Modern2020 will focus on monitoring of the near-field during repository operational phases.

The Modern2020 consortium brings together 28 organisations from Europe and Japan that are committed to the common goal of promoting a targeted and innovative cooperation and synergy in the field of monitoring and to respond in an efficient way to major issues and challenges of developing and implementing a monitoring system.

8 radioactive waste management organisations	
5 organisations undertaking research on radioactive waste management in their respective country	
1 technical support organisation	
4 organisations with specialist technical monitoring expertise	
8 academic research units	
2 specialist consultants	

Further information available on [www.modern2020.eu](http://www.modern2020.eu),

## NEWS from TECHNICAL PROJECTS

### JA3 - Waste forms and their behaviour C14

## CAST



The CAST Project (CARbon-14 Source Term) aims to develop understanding of the potential release mechanisms of carbon-14 from radioactive waste materials under conditions relevant to waste packaging and disposal to underground geological disposal facilities. The CAST consortium brings together 33 partners with a range of skills and competencies in the management of radioactive waste containing carbon-14, geological disposal research, safety case development and experimental work on gas generation. The project began in October 2013 and runs for 54 months. There are seven work packages. Work Packages 2,3,4 and 5 are experimentally-based and are investigating carbon-14 release from steel, Zircaloy, ion-exchange resins and graphite. Work Package 6 will evaluate the results in the context of safety assessments and Work Package 7 is responsible for dissemination. CAST is coordinated in Work Package 1.

22 deliverables have been published on the CAST website. These include the State of the Art reviews on the current knowledge of the behaviour and carbon-14 release from steels, Zircaloys, ion-exchange resins and graphite (D2.1, D3.1, D4.1 and D5.5 respectively).

The following deliverables have been published on the CAST website since March 2015:

- D2.2. Annual progress report – Year 1;
- D3.6 Intermediate report on the analysis of samples total C14 content;
- D3.7 Definition of the analytical strategy for C14 measurements;
- D3.8 Description of Zircaloy-4 dissolution experiments in a shielded box; and
- D5.5 Review of current understanding of inventory and release of C14 from irradiated graphite.

The members of CAST are continuing to develop their experimental and analytical methodologies. The amount and chemical form of carbon-14 is being determined in Zircaloy cladding from an irradiated PWR UO<sub>2</sub> fuel rod segment as part of WP3. The cladding samples were dry cut and digested in dilute acid. Carbon-14 was separated from other radionuclides in gaseous and aqueous aliquots and analysed by liquid scintillation counting (LSC). Preliminary results described in the D3.8 report show that the measured content of C-14 is in good agreement with the calculated inventory and with work published elsewhere.

Nagra and PSI hosted a joint Work Package 2 and 3 workshop on analytical methods in May 2015. WP2 and WP3 are utilising similar experimental methodologies so there is benefit in close knowledge dissemination between these Work Packages.

An overview of CAST, with a focus on the main observations from the state of the art reviews, was presented at the Nuclear 2015 Conference in Romania in May 2015 by the CAST project coordinator.

The CAST website can be found at:

<http://www.projectcast.eu/>

*The project has received funding from the European Union's European Atomic Energy Community's (Euratom) Seventh Framework Programme FP7/2007-2013 under grant agreement no. 604779, the CAST project.*



*Dissolution of Zircaloy-4 sample (on the left) and CO<sub>2</sub> absorption apparatus including catalytic furnace (on the right) (courtesy of Karlsruhe Institute of Technology)*

## NEWS from TECHNICAL PROJECTS

*JA2 - Full scale demonstration of plugging and sealing*

**DOPAS**

DOPAS



### September 2015: Energetic DOPAS Training Workshop 2015 carried out in the Czech Republic

In the middle of September 2015, 12 enthusiastic training workshop participants from the Czech Republic, Finland, Germany, Great Britain, Hungary and Sweden engaged in the learning's from the DOPAS project and the role of plugs and seals in the different demonstration programmes. The tutors for this 5-day workshop came from CTU, ÚJV Řež and SÚRAO (Czech Republic), Posiva (Finland), Andra (France), RWM (UK), GRS (Germany), and SKB (Sweden).



©Marjatta Palmu

The training methods of this one week workshop consisted of both theoretical content and hands-on exercises carried out in small groups. The participants felt that their objectives and expectations for the training workshop had been well fulfilled. The training materials will be published on the DOPAS website.

### DOPAS Experiments have been active through whole summer 2015 in different countries.

**Czech** Experimental pressure and sealing plug Experiment 2 EPSP is moving to the phase where its behaviour is assessed by the monitoring activities and the use of numerical analysis and modelling techniques. The outer shotcrete plug was emplaced in July 2015 in Josef Gallery.

The onsite work has been ongoing as part of Experiment 4 POPLU, which demonstrate the full scale implementation of deposition tunnel plug structure. In a future repository site in **Finland** the first part of POPLU plug was cast in July 2015 as well and the second part of the plug was cast in September 2015.

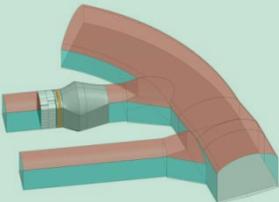
At the same time in **France** the industrial demonstration of an Full scale seal or Experiment 1 FSS has already reached the dismantling phase which aims to confirm the fulfilment of installation requirements. Comprehensive amount of sampling was done when testing the methods of retrieving the parts of the plug.

## DOPAS 2016

### Plugging and Sealing Seminar

Location Turku Finland

**May 25th - 27th 2016, Turku - Finland**



**Schedule:**

- Call for abstracts starts in June 2015.
- Registration opens in August 2015 -
- Deadline for abstracts: 30<sup>th</sup> November 2015.
- Author notification: 31<sup>st</sup> January 2016.
- Final programme available: 28<sup>th</sup> February 2016.
- Extended abstract submission: 31<sup>st</sup> March 2016.
- Seminar 25-27<sup>th</sup> May 2016.
- 8 Proceedings published 31<sup>st</sup> August 2016.

Stay tuned to [www.posiva.fi/en/dopas](http://www.posiva.fi/en/dopas) and [IGD-TP website](#)



The **DOPAS newsletter 4** has been published in June 2015 and is available [here](#).



The **DOPAS Seminar Announcement** is available [here](#) and [flyer here](#).

## FOCUS on HORIZON2020

### Second EURATOM Work Programme and call (2016-2017)

The **Euratom Research and Training Programme** complements **Horizon 2020** in the field of nuclear research and training. Its general objective is to pursue nuclear research and training activities with an emphasis on continually improving nuclear safety and radiation protection, notably to contribute to the long-term decarbonisation of the energy system in a safe, efficient and secure way. By contributing to these objectives, the Euratom Programme shall reinforce outcomes under the three priorities of the Horizon 2020: excellent science, industrial leadership, and societal challenges.

The 2016-2017 work programme was adopted October 13, 2015 by the Commission and is available on the [European Commission Participant Portal website](#).

The related calls for proposals were published October 14, 2015. The activities funded by the Work Programme are organised in the following main sections:

- A. Support safe operation of nuclear systems
- B. Contribute to the development of solutions for the management of radioactive waste
- C. Foster radiation protection
- D. Management of research reactor availability in Europe
- E. Support the development of nuclear competences at EU level
- F. Fission/fusion cross-cutting actions  
+ Other actions (InnovFin, INCO)

The actions under Section B (*Contribute to the development of solutions for the management of radioactive waste*) take into account the European collaborative research activities already supported notably by Euratom and the priorities of the Strategic Research Agenda of IGD-TP:

1. Addressing key priority R&I issues for the first-of-the-kind geological repositories (NFRP6)
2. Research and innovation on the overall management of radioactive waste other than geological disposal (NFRP7)
3. Pan-European knowledge-sharing and development of competence in radioactive waste management (NFRP8)



### CALL FACTS

- **Call publication** 14/10/2015
- **Submission opens** 11/05/2016
- **Call deadline** 05/10/2016
- **Evaluation** Oct.16 - Jan.2017
- **Results** 01/02/2017
- **Grant preparations** Feb. - May 2017
- **Projects launch** June - July 2017
- **Budget (global)** 105,04M€
- **Budget (NFRP 6-8)** 18,89M€

### GET SUPPORT

#### [National Contact Points \(NCP\)](#)

[Enterprise Europe Network](#) – contact your EEN national contact point for advice to businesses with special focus on SMEs. The support includes guidance on the EU research funding.

[European IPR Helpdesk](#) assists you on intellectual property issues.

[IT Helpdesk](#) – contact the Participant Portal IT helpdesk for questions such as forgotten passwords, access rights and roles, technical aspects of submission of proposals, etc.

[Partner Search Services](#) helps you find a partner organisation for your proposal.

[H2020 Funding Guide](#) your online guide on the procedures from proposal submission to managing your grant.

## SAVE THE DATE!

### JOPRAD Regional Meeting

**Date:** 3-4 February 2016

**Place:** Bucharest, Romania

### Waste Management 2016

**Date:** 6-10 March 2016

**Place:** Phoenix, USA

### DOPAS Seminar

**Date:** 25-27 May 2016

**Place:** Turku, Finland

### ATALANTE 2016

**Date:** 5-10 June 2016

**Place:** Montpellier, France

### ICONE24

**Date:** 26-30 June 2016

**Place:** Charlotte, USA

### 9<sup>th</sup> International Conference on Nuclear and Radiochemistry

**Date:** Aug. 29 - Sep. 2 , 2016

**Place:** Helsinki, Finland

### JOPRAD Mid-Term Workshop

**Date:** 7-8 September 2016

**Place:** Prague, Czech Republic

### IGD-TP Exchange Forum 2016

**Date:** 25-26 October 2016

**Place:** Spain

More info on [www.igdtp.eu](http://www.igdtp.eu)